

REMARKS

Claims 1, 2, 7, 9, 14, 15, and 17-19, as amended, appear in this application for the Examiner's review and consideration. A marked up version of the amended claims, showing insertions and deletions, is attached in the Appendix.

Claim Rejections- 35 U.S.C. § 102

U.S. Patent No. 5,702,451 to Biedermann *et al.*

Claims 1, 7, 9, 14, 15, and 17 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,702,451 to Biedermann *et al.* (the "Biedermann '451 patent"). Applicants disagree.

The Biedermann '451 patent does not teach or suggest ***a first channel extending across at least a portion of the top surface from the perimeter edge***. As an initial matter, Applicants disagree with the Examiner's assertion that holes 14 can be construed as "channels" or that prongs 21 "have channels established anterolaterally between the prongs," for the reasons presented in Applicants Amendment submitted on March 22, 2001. Moreover, the Biedermann '451 patent does not teach, suggest, or disclose that holes 14 or prongs 21 have spaces therebetween which are for receiving a surgical instrument. However, assuming for the sake of argument that either of these elements can be construed as "channels", they do not extend ***across at least a portion of the top surface from the perimeter edge***, as recited in claim 1. In contrast, the holes 14 of the Biedermann '451 patent are located on the interior of the plate, spaced from the perimeter edge, and extend longitudinally through the plate. The spaces between prongs 21 are not on the top surface whatsoever. Additionally, the prongs 21 are inserted into recesses 9, 10, 9', 10' of jacket 1 so that any space between the prongs is contained within the jacket and cannot be used to receive a surgical instrument.

As the features recited in claim 1 are not taught or suggested by the Biedermann '451 patent, Applicants submit that this claim is allowable over the cited reference. With respect to claims 7, 9, 14, 15, and 17, which depend from claim 1, Applicants submit that, because these claims define more particular aspects of Applicants' invention (as well as including the features of claim 1), they are also patentably distinguished over the Biedermann '451 patent for the above reasons, as well as the totality of the claimed invention.

U.S. Patent No. 5,776,197 to Rabbe *et al.*

Claims 1, 2, 9, and 14 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,776,197 to Rabbe *et al.* (the “Rabbe ‘197 patent”). For the reasons which follow, Applicants submit that the Rabbe ‘197 patent does not teach or suggest the invention as now claimed.

First, the Rabbe ‘197 patent does not teach or suggest an end member with a second portion configured and dimensioned to be *inserted into a bore of the implant*. In contrast, the second portion of the Rabbe ‘197 patent identified by the Examiner has an annular surface with internal threading that goes *outside* of the threaded cylindrical body 21. (See Fig. 3). In addition, it is clear that element 35, which the Examiner alleges to be a shoulder, is not *sized to rest on an end edge of the implant*, as this element never contacts body 21. In fact, since the second portion of the Rabbe ‘197 patent goes outside of body 21, the alleged shoulder must necessarily be sized larger than body 21, not *sized to rest on an end edge* thereof. Thus, the Rabbe ‘197 patent teaches away from the claimed invention.

As the features recited in claim 1 and 2 are not taught or suggested by the Rabbe ‘197 patent, Applicants submit that these claims are allowable over the cited reference. With respect to claims 9, and 14, which depend from claim 1, Applicants submit that, because these claims define more particular aspects of Applicants’ invention (as well as including the features of claim 1), they are also patentably distinguished over the Rabbe ‘197 patent for the above reasons, as well as the totality of the claimed invention.

In addition, with respect to claim 2, claim 2 recites that the teeth are provided in a two dimensional array with the teeth being spaced apart from one another for interlocking with the bone. As the teeth of the Rabbe ‘197 patent form a single ring and not a two dimensional array, Applicants submit that claim 2 is patentable over this reference for this additional reason.

Claim Rejections- 35 U.S.C. § 103

Claims 1, 2, 17, and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,700,291 to Kuslich *et al.* (the “Kuslich ‘291 patent”) in view of U.S. Patent No. 6,143,033 to Paul *et al.* (the “Paul ‘033 patent”).

First, with respect to the Paul ‘033 patent, pursuant to 35 U.S.C. § 103(c) and M.P.E.P. § 706.02(l)(1), effective November 29, 1999, subject matter which was prior art

under former 35 U.S.C. §103 via 35 U.S.C. § 102(e) is now disqualified as prior art against the claimed invention if that subject matter and the claimed invention "were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person." Common ownership of the Paul '033 patent and the rights to the present application may be found in the assignment documents which are recorded in the Patent and Trademark Office at Reel 9818, Frame 0557 for the Paul '033 patent and at Reel 010597, Frame 0246 for the present application, conveying the entire rights in the applications to "Synthes (U.S.A.)" of Paoli, PA, the same organization. Accordingly, the Paul '033 patent is disqualified as prior art against the presently claimed invention.

As noted by the examiner, the Kuslich '291 patent alone does not teach or suggest the invention as claimed. Thus, Applicants respectfully submit that claims 1, 2, 17, and 18 are patentable over the Kuslich '291 and Paul '033 patents.


Conclusion

In view of the foregoing amendments and remarks, it is believed that all rejections have been overcome and should be withdrawn. Thus, all current claims are submitted to be in condition for allowance, early notice of which would be appreciated. If the Examiner does not agree, then a personal or telephonic interview is respectfully requested to discuss any remaining issues and accelerate the eventual allowance of the claims.

No fee is believed to be due for this submission. Should any fee be required, however, please charge such fee to Pennie & Edmonds LLP Deposit Account No. 16-1150.

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Respectfully submitted,


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Enclosure

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Appendix

1. (Twice Amended) An end member for use with an implant for fusing bone comprising:
 - a first portion with a top surface adopted and configured to engage the bone and having a[n] perimeter edge and a first channel extending across at least a portion of the top surface from the perimeter edge for receiving a surgical instrument;
 - a second portion configured and dimensioned to be inserted into a bore of the implant;
 - and
 - a shoulder joining the first and second portions and sized to rest on an end edge of the implant when the second portion is inserted in the bore of the implant.